

Atherosclerosis

Summary of Methods and Data for Estimate of Costs of Illness

- | | |
|---|-----------------|
| 1. Estimated Total Economic Cost | \$ 6.2 billion |
| Estimated Direct Cost | \$ 5.5 billion |
| Estimated Indirect Cost | \$ 0.7 billion |
| Reference Year | 1999 |
| IC Providing the Estimate | NHLBI |
| | |
| Direct Costs Include: Other related nonhealth costs | No |
| Indirect Costs Include: | |
| Mortality costs | Yes |
| Morbidity costs: Lost workdays of the patient | No |
| Morbidity costs: Reduced productivity of the patient | No |
| Lost earnings of unpaid care givers | No |
| Other related nonhealth costs | No |
| Interest Rate Used to Discount Out-Year Costs | 6 % |
| 2. Category code(s) from the International Classification of Diseases, 9th Revision, Clinical Modification, (ICD-9-CM) for all diseases whose costs are included in this estimate: <u>440</u> . | |
| 3. Estimate Includes Costs: | |
| Of related conditions beyond primary, strictly coded ICD-9-CM category | No |
| Attributable to the subject disease as a secondary diagnosis | No |
| Of conditions for which the subject disease is an underlying cause | No |
| 4. Population Base for Cost Estimate (Total U.S. pop or other) | Total U.S. pop. |
| 5. Annual (prevalence model) or Lifetime (incidence model) Cost: | Annual |
| 6. Perspective of Cost Estimate (Total society, Federal budget, or Other) | Total Society |
| 7. Approach to Estimation of Indirect Costs | Human Capital |

8. Source of Cost Estimate

Unpublished. Contact Mr. Thomas Thom, NHLBI, 301-435-0710.

9. Other Indicators of Burden of Disease

The meaning of the term "atherosclerosis" as used here is confined to peripheral atherosclerotic disease, i.e. not involving the heart (coronary heart disease) or brain (cerebrovascular disease). It is estimated that in 1995, over 2 million persons had peripheral atherosclerosis. In 1998, it was the 14th leading cause of death.

10. Commentary

Direct costs by type of cost for total cardiovascular diseases in 1997 were estimated by Tom Hodgson (National Center for Health Statistics) in a report to be published. He used a variety of survey data from NCHS and the Health Care Financing Administration, and elsewhere.

Atherosclerosis costs for 1997 are estimated by applying to Hodgson's total cardiovascular disease costs the proportion that atherosclerosis is of total cardiovascular diagnoses for: a)

hospital days, b) physician office visits, c) drug mentions in physician visits, d) home health care discharges, and e) nursing home discharges as reported in the latest NCHS surveys. HCFA estimated expenditures for personal health care increased 10% from 1995 (\$879.3 billion) to 1997 (\$969.0 billion). This increase was applied to the 1997 direct cost estimate for atherosclerosis, giving an estimate for 1999. Only the primary diagnosis of atherosclerosis reported in the surveys was considered. Allocating costs according to the primary diagnosis eliminated overlap with other diseases. Costs associated with atherosclerosis as a comorbid condition to some other primary diagnosis were not included. Costs incurred by family or other personal caregivers for atherosclerosis patients cannot be estimated and were not included. The national health expenditures that cannot be allocated to diseases (e.g. construction and research) were not included in the atherosclerosis direct costs.

Indirect morbidity cost of atherosclerosis could not be estimated. The indirect mortality cost in 1997 represents lost productivity based on lost earnings attributed to premature deaths from atherosclerosis in that year. It was estimated by applying the numbers of atherosclerosis deaths in 1997, by age and sex, reported from national vital statistics, to the age-sex estimates of the present value of lifetime earnings discounted at six percent. These lifetime values were estimated for 1997 by Wendy Max and Dr. Dorothy Rice (University of California, San Francisco). They are not published. These estimates were obtained by personal communication. Those values were inflated to 1999 using an inflation factor (10%) based on mean annual wages of year-round full time workers reported for 1995 and 1997 by the Bureau of the Census. Atherosclerosis deaths in 1997 were those where atherosclerosis was the underlying cause of death regardless of what other contributing causes may have been present. Other deaths, where atherosclerosis was a contributing cause, were not included. The accuracy of estimates of the present value of lifetime earnings has not been assessed by anyone at NHLBI; estimates were taken at face value.